UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,958	01/26/2004	Roy E. Marsten	67815-000005	9332

90638 7590 08/04/2010

Seyfarth Shaw LLP
Suite 2500
1075 Peachtree Street, N.E.
Atlanta, GA 30309

EXAMINER	
PARKER, BRANDI P	
ART UNIT	PAPER NUMBER
3624	

MAIL DATE	DELIVERY MODE
08/04/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/764,958	MARSTEN, ROY E.	
	Examiner	Art Unit	
	BRANDI P. PARKER	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3,6-11,13-20,27 and 30-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-3, 6-11, 13-20, 27, and 30-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgements

1. The following is a Final Office action in response to communications filed on 3/17/2010. Claims 2-3, 6-11, 13-20, 27, 30-31 and 33-38 are pending. Claims 6-11, 13, 27 and 31 have been amended. Claims 32-38 are newly added.

2. In the previous Office Action mailed 9/17/2009, notice was taken by the Examiner that certain subject matter is old and well known in the art. Per MPEP 2144.03(c), these statements are taken as admitted prior art because no traversal of this statement was made in the subsequent response. Specifically, it has been taken as prior art that:

- displaying valid product configurations as an ordered array or a dimensional space (i.e. table) is old and well known and commonly found in product tables or bill of materials (BOM).
- fast enumeration algorithms used to iterate though the contents of all possible configurations and list the partial configurations separately is old and well known.

Response to Arguments

3. Applicant's arguments with respect to the objections of dependent claims 2-3, 6-22 and 25-26 and cancellation of claims 12, and 21-26 has been fully considered, and is persuasive. The objection of claims 2-3, 6-11 and 13-20 is withdrawn.

4. In response to Applicant's argument that Kapadia fails to address or help the manufacturer or seller decide in advance, what product configurations it should make or sell to its entire customer base, located on page 13 of Applicant Remarks, Examiner respectfully disagrees. Kapadia teaches a configuration engine that restricts the selections made by the user to a set defined in advance by the manufacturer (column/line 3/49-58). Kapadia specifically teaches a default or optimal configuration that is presented to the user in the ATP engine where the best configuration is selected from all available product components, instead of the configuration engine that is lead by the consumer (column/line 8/58-9/3). Furthermore, the optimization is performed prior to the selection by the user (i.e. in advance) (column/line 9/34-35). Thus, Kapadia does teach and suggest the limitations of independent claim 27.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 27, 30-31, 33-38, 2-3, 6-11 and 13-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 27 is directed towards a computerized method for identifying in advance, an optimum subset of product configurations. It is unclear as to the particular event that the identifying step occurs before or in advance. Therefore, claim 27 is rejected for being indefinite under 35 U.S.C. 112, second paragraph.

8. Claims 30-31, 33-38, 2-3, 6-11 and 13-20 are rejected for being dependent upon rejected claim 27.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 2-3, 6-11, 13-14, 20, 27, 30 and 31are rejected under 35 U.S.C. 103(a) as being unpatentable over Kapadia et al (US 7039602) in view of Mike Thurber, "Open Road to Strategic Value", Intelligent Enterprise, June 1, 1999 article and Schierholt (US 2005/0149377).

11. Regarding to claims 6-11, 27, 30 and 31, Kapadia teaches a computerized system for identifying an optimum set of product configurations comprising:

a. a processor (column/line 8/14-21, regarding ATP server engine);

b. a database for storing product configuration data and historical demand data associated with the plurality of possible product configurations, wherein each product configuration includes a specific combination of choices of options associated with the respective product (column/line 3/49-67, regarding configuration engine); and

c. a computer readable medium that is usable by the processor and is operatively coupled to the database, the medium having stored thereon a sequence of instructions that when executed by the processor causes the execution of the steps of:

i. receiving product configuration data from the database representative of the plurality of possible product configurations (column/line 3/49-67, regarding configuration engine);

based on the received product configuration data, representing every product configuration in the plurality of possible product configurations mathematically as an n-dimensional vector array in a possible product configuration space, wherein each n-dimensional vector array identifies a unique combination of options associated with its respective product configuration, Examiner has taken Official Notice that displaying valid product configurations as an ordered array or a dimensional space (i.e. table) is old and well known and commonly found in product tables or bill of materials (BOM).

Applicant failed to challenge the fact that the concept of fast enumeration is old and well known in the previous actions, therefore it is admitted prior art.

applying mix-and-match rules to the n-dimensional vector arrays in the possible product configuration space to identify invalid product configurations and, correspondingly (column/line 5/8-12, 8/58-9/3, regarding rules to determine a complete default selection)

outputting the generated optimum subset of valid product configurations that identifies the limited number of product configurations that should be offered to the company's customer base over a predefined future period of time to satisfy the desired objective of the company (column/line 6/56-7/2, 7/13-30 regarding the optimization function for default selection that minimizes costs and maximizes profit).

Kapadia does not explicitly teach incorporating demand for the valid product configurations. However, Schierholt teaches:

receiving historical demand data from the database for the valid product configurations, the historical demand data including a demand value for each respective feature and option of each respective feature associated with each valid product configuration (paragraph 0008, 0010, 0013);

It would have been obvious to one with ordinary skill in the art to combine the method disclosed in Kapadia with the methods in Schierholt to improve the optimization

process to increase profit and since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Schierholt does not explicitly teach historical demand for all possible product configurations. However, Thurber teaches:

d. a demand simulator for receiving historical demand associated with product configurations (pg. 3 paragraph 4 and 5, regarding historical records of all vehicle sales, including model, price and specific equipment options)

e. analyzing the valid product configuration space via an optimization model to generate an optimum but limited subset valid product configurations from the plurality of valid product configurations based on the desired objective of the company and the received demand values associated with each of the valid product configurations, wherein valid product configuration space is analyzed and evaluated according to the desired objective of the company prior to identifying the optimum subset of valid product configurations; (pg. 3, paragraph 6, regarding selecting a subset of the equipment options that are more critical)

It would have been obvious to one with ordinary skill in the art to combine the method disclosed in Kapadia and Schierholt to teach historical demand for all possible product configurations as taught by Thuber since the claimed invention is merely a

combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

12. As to claim 2, Kapadia further teaches associating a cost and a revenue to each valid product configuration (column/line (column/line 6/56-7/2, 7/13-30, regarding the minimization of the overall cost of the product; column/line 7/38-44, regarding selecting the default configuration that maximizes profit).

13. Regarding claim 3, Kapadia further teaches wherein the cost associated with each valid product configuration is comprised of a plurality of per option costs (column/line 8/45-57, regarding minimizing the retail price of orderable items).

14. With respect to claim 13, Kapadia teaches the method of claim 12. Examiner notes that it is old and well known in the art to us fast enumeration algorithms to iterate though the contents of all possible configurations and list the partial configurations separately in an n-dimensional vector array (i.e. table). Applicant failed to challenge the fact that the concept of fast enumeration is old and well known in previous actions, therefore it is admitted prior art.

15. As to claim 14, Kapadia further teaches the method of claim 1 wherein the step of defining configuration neighborhoods comprises the step of defining a relation structure (column/line 8/30-38, regarding relationships of items).

16. As to claim 20, Kapadia further teaches wherein the relation structure identifies at least one valid product configuration that captures another valid product configuration through an upgrade, conversion, or acceptance of at least one option (column/line 8/22-29).

17. Regarding claims 33 and 34, Kapadia further teaches wherein the step of analyzing the valid product configuration space via an optimization model to generate an optimum but limited subset of valid product configurations from the plurality of valid product configurations is further based on (i) the cost to manufacture each valid product configuration and (ii) the revenue value of each valid product configuration (column/line 6/56-7/2, 7/13-30, regarding the optimization function for default selection that minimizes costs and maximizes profit; column/line 7/38-44 selecting the default configuration that maximizes profit).

18. Regarding claims 35-38, Kapadia teaches the configuration of products according to optimized functions and constraints (column/line 9/60-10/1, regarding range and degree of optimization functions). Examiner takes Official Notice that the use of mathematical techniques such as branch-and-bound algorithms, Lagrangian

relaxation algorithms and pattern generation algorithm optimizing functions are old and well known. It would have been obvious to one with ordinary skill in the art to modify the system of Kapadia with the use of any mathematical optimization technique that is old and well know involved with operations research, functions and constraints for optimization purposes. Thus, the simple substitution of one known element for another producing a predictable result renders the claim obvious.

19. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kapadia et al (US 7039602) in view of Mike Thurber, "Open Road to Strategic Value", Intelligent Enterprise, June 1, 1999 article and Schierholt (US 2005/0149377) as applied to claims 2-3 and 6-14 above, in further view of Balasinski (US 7231374).

Regarding to claim 15, Kapadia in view of Schierholt and Thurber teaches the method of claim 14. Kapadia does not explicitly teach having options that are upgradeable. However, Balasinski teaches an upgrade relation that identifies at least one feature having an option that is upgradeable (column/line 6/23-29). Having the upgrade being at no additional cost to a customer consist of non functional descriptive material that does not limit the scope of the claim. It would have been obvious to one with ordinary skill in the art to combine Kapadia with Balasinski to increase a manufacturer's product exposure by offering available products that are compatible with the product that the customer wishes to purchase since the claimed invention is merely a combination of old elements, and in the combination each element merely would have

performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

20. With respect to claim 16, Kapadia in view of Schierhold and Thurber does not explicitly teach features having options that are convertible at a conversion cost. However, Balasinski teaches the method of claim 14 wherein the relation structure is a convert relation that identifies at least one feature having an option that is convertible to another option at a respective conversion cost (Figure 2, column/line 2/2-28, 44-61, 7/61-67).

21. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kapadia et al (US 7039602) in view of Mike Thurber, "Open Road to Strategic Value", Intelligent Enterprise, June 1, 1999 article and Schierholt (US 2005/0149377) as applied to claims 2-3 and 6-14 above, in further view of Walker et al (US 7347364)

22. As to claim 17 and 19, Kapadia teaches having a relation structure (column/line 8/30-38, regarding relationships of items). Kapadia does not explicitly teach having an option at an acceptance value or probability customer will accept the option. However, Walker teaches identifying at least one feature having an option that is acceptable to a consumer desiring a different option at a respective acceptance value (column/line 4/46-67, regarding “expected value” of alternative option). It would have been obvious to one having ordinary skill in the art to combine to Kapadia with Walker to select the best

options to present to the customer to improve the changes that the customer will select the option and since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

23. Regarding claim 18, Kapadia does not explicitly teach having an acceptance value that is a probability that the customer will accept the option. However, Walker teaches wherein the acceptance value is a probability that the customer will accept the acceptance option instead of the different option (column/line 4/46-67). It would have been obvious to one having ordinary skill in the art to combine to Kapadia with Walker to select the best options to present to the customer to improve the changes that the customer will select the option and since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Conclusion

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

25. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDI P. PARKER whose telephone number is (571) 272-9796. The examiner can normally be reached on Mon-Thurs. 8-5pm.

27. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on (571) 272-6702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

28. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRANDI P PARKER/
Examiner, Art Unit 3624
7/31/2010

/Romain Jeanty/
Primary Examiner, Art Unit 3624